

Title (en)

SIDE-CHANNEL PUMP WITH ASYMMETRICAL CROSS-SECTIONS OF THE SIDE CHANNELS

Title (de)

SEITENKANALPUMPE MIT ASYMMETRISCHEN QUERSCHNITTEN DER SEITENKANÄLE

Title (fr)

POMPE À CANAUX LATÉRAUX DONT LES CANAUX LATÉRAUX PRÉSENTENT UNE SECTION TRANSVERSALE ASYMÉTRIQUE

Publication

**EP 2946116 A1 20151125 (DE)**

Application

**EP 14700029 A 20140102**

Priority

- DE 102013200713 A 20130118
- EP 2014050017 W 20140102

Abstract (en)

[origin: WO2014111272A1] The invention relates to a side-channel pump that allows a reduced wear. The side-channel pump has a housing which encloses a pump chamber (7). An impeller (3) is received so as to be rotatable inside the pump chamber (7). An inlet side channel (31) and an outlet side channel (33) are also formed inside the pump chamber (7). The impeller (7) has, in a blade region near the circumference thereof, a plurality of radially outward-extending blades (11). The inlet side channel (31) and the outlet side channel (33) run on opposite sides of the impeller (3) and both adjoin the impeller (3). The two side channels (31, 33) both extend in a partially annular shape along a flow path from an inlet channel to an outlet channel. The proposed side-channel pump is characterized in that the inlet side channel (31), averaged along the flow path, has a smaller cross-section than the outlet side channel (33). In this manner the impeller (3) can be maintained in a force equilibrium during operation. The friction between the impeller (3) and adjoining walls (19, 21) can be kept small and thereby wear phenomena can be kept small.

IPC 8 full level

**F04D 5/00** (2006.01)

CPC (source: EP US)

**F04D 5/001** (2013.01 - US); **F04D 5/008** (2013.01 - EP US); **F05B 2250/503** (2013.01 - EP US)

Citation (search report)

See references of WO 2014111272A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

**WO 2014111272 A1 20140724**; CN 104937276 A 20150923; DE 102013200713 A1 20140724; EP 2946116 A1 20151125; US 2015354573 A1 20151210

DOCDB simple family (application)

**EP 2014050017 W 20140102**; CN 201480005215 A 20140102; DE 102013200713 A 20130118; EP 14700029 A 20140102; US 201414761987 A 20140102